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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,817	06/30/2003	Jay K. Bass	10990629-3	3021

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EXAMINER

NEGIN, RUSSELL SCOTT

ART UNIT

PAPER NUMBER

1631

DATE MAILED: 01/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/611,817	Applicant(s) BASS, JAY K.	
	Examiner Russell S. Negin	Art Unit 1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 27-34 is/are pending in the application.
- 4a) Of the above claim(s) 3-15, 17, 18 and 27-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/30/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I and Specie A (Claims 1, 2 and 16) in the reply filed on November 21, 2005 is acknowledged.

The traversal between Groups I and III is on the grounds that there is no increased burden of search due to the classifications being identical between the two groups.

The traversal between Groups I and II is on the same grounds. Additionally, the applicants argue that the two Groups are related partly because Group II is dependent from Group I. It is also stated that Group II is a more narrow application of Group I.

The traversal of the species election is on the grounds that not only are the classifications identical, but the analyses between the species are not independent.

These arguments are not found persuasive for the following reasons:

Although all of the classifications for the groups and species are identical, identical classifications do not necessarily indicate lack of undue search burden. There does exist a search burden for examining the three groups together in that the search for the general method of generating images differs from that specifically designated to investigate arrays, mainly for biological purposes. Additionally, the argument that Group II is dependent from Group I is inaccurate. As currently stated in the claims, Group II is NOT dependent from Group I.

Thus according to the M.P.E.P., section 806, restriction is proper when "the inventions are related as disclosed but are distinct as claimed, restriction may be

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proper.” In this case, while Groups I and II are related as disclosed, they are claimed distinctly, which makes the restriction proper. Group II is an application of the generalized claims of Group I to a specific application of an array while Group I is a distinct method of obtaining a set (not necessarily an array) of images. In addition, with the specie election, while the applicant argues that the species are independent, they are distinct because although they are related as disclosed, they are claimed distinctly as separate entities. An image obtained from a single location is distinct from an image obtained from multiple locations.

The requirement is still deemed proper and is therefore made FINAL.

Claims 3-15, 17-18, and 27-34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group or Species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on November 21, 2005.

Comments

It is acknowledged that claims 19-26 are cancelled. Claims 1, 2, and 16 are under investigation in this Office action.

Information Disclosure Statement

The Information Disclosure Statement filed June 30, 2003 does not contain a legible copy of each reference crossed over on the list of references. It is not known whether this is an error of the applicants or a scanning error by the Office. Consequently the

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missing references have been listed as not considered in the signed copy of the list of references attached to this Office action. If the applicants provide a legible copy of the missing references in response to this Office action, the references will be considered under 37 CFR 1.97(f), and a signed copy of the list of references indicating consideration of the missing references will be provided to the applicants without the necessity of the applicants filing a second Information Disclosure Statement.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Svyatsky [USPAT 4,893,952] in view of Wang et al. [USPAT 4,508,463].

Claims 1, 2, and 16 state:

1. A method comprising:
 - obtaining a set of multiple images of a target feature location on an array of multiple features, each image of the set representing the target feature location following deposition of a corresponding sub-set of multiple droplets for that feature; and
 - generating an overlay composite from the image set.
2. A method according to claim 1 wherein the overlay composite comprises a region of overlap of the droplet sub-sets.
16. A method according to claim 1 additionally comprising:
 - exposing the array to a sample;
 - interrogating the array following the exposure and optionally processing results of the interrogation; wherein

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either the interrogation or processing is based at least in part on the overlay composite.

Svyatsky teaches the first step in the body of the method in claim 1 and the first and second steps in the body of claim 16 in the abstract with a first sentence that states, "This invention related to an improved dot matrix-type printing system wherein the wires of the print head are arranged to impinge on the reverse side of a workpiece to cause it to be moved into contact with a cavitated ink transfer roller, whereby, the workpiece is brought into direct contact with ink droplets carried by the caves in the cavitated surface in such a fashion as to create a symbolic array on the frontside of the workpiece."

This passage teaches the first step in the body of claim 1 in that the multiple images are alphabetic/numeric characters, each with its own location on the workpiece. The stream of characters forms an array (which is never explicitly required in the specification to be comprised of biological macromolecules). The stream of characters form cavitated indents on the workpiece to enable the ink to generate an image on them. A sub-set of multiple ink droplets are used to generate the images.

In terms of claim 16, the array of impinged characters on the workpiece is exposed to a series of ink droplets. In the end, since "interrogation" is not explicitly defined in the disclosure, simply reading or scanning the printed result suffices this requirement in the second body step of claim 16.

However, Svyatsky does not teach the generation of an overlay composite (the second body step of claim 1), nor does it teach overlap of the subsets (claim 2) or interrogation of overlay of the subsets (claim 16, third body step).

The first sentence in the abstract of Wang et al., however, does teach such limitations. As stated, "A high density dot matrix printer is disclosed which can print characters with a variable font and having print resolution close to that of a typewriter. Printing on both a forward and reverse pass of a line of characters with both the dot print head coupled with offsetting the dot matrix print head for the reverse pass printing doubles the line density in printing characters to increase resolution."

Thus, the going "back and forth" over each line generates an overlay composite (claim 1, second step in the body) for which there exists overlap of the droplet subsets (claim 2). Again, it is sufficient to explain interrogation as reading the printed matter, in which reading the final product fulfills the requirements of the third body step of claim 16.

Thus, it would have been obvious of someone of ordinary skill in the art at the time of the instant invention to combine the dot matrix printers of Svyatsky and Wang et al. to result in the instant invention because both printers use dot matrix technologies to result in the required printed matter with the advantage of Wang et al. utilizing the composite layers of ink to result in a higher resolution image.

Conclusion

No Claim is allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the central PTO Fax Center. The faxing of such pages must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CFR § 1.6(d)). The Central PTO Fax Center Number is (571) 273-8300.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell Negin, Ph.D., whose telephone number is (571) 272-1083. The examiner can normally be reached on Monday-Friday from 7am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Ardin Marschel, Ph.D., Supervisory Patent Examiner, can be reached at (571) 272-0718.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instrument Examiner, Tina Plunkett, whose telephone number is (571) 272-0549.

Information regarding the status of the application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information on the PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

-RSN 1/23/2006

RSN 1/23/06

John S. Brusca 23 January 2006
JOHN S. BRUSCA, PH.D.
PRIMARY EXAMINER